

REMARKS

In the Office Action dated June 23, 2008, claims 1-69 are pending in the application. Claims 27-69 have been withdrawn from consideration, and claims 1-26 are examined.¹ The application is objected to for certain alleged informalities. Claims 1-24 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Lewis et al. (Gene, 2000 Apr 4; 246(1-2):81-91, and GenBank Accession No. AF191099, April 24, 2000; collectively "Lewis"). Claims 25-26 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Lewis in view of Lee et al. (FEBS Lett. 2000 Dec 8; 486(2):103-6) ("Lee") and Parveez et al. (Biochemical Society Transactions, 2000, 28(6):969-972) ("Parveez").

This Response addresses each of the Examiner's rejections and objections. Applicants therefore respectfully submit that the present application is in condition for allowance. Favorable consideration of all pending claims is therefore respectfully requested.

Amendments

Independent claims 1, 8 and 18 have been amended to replace the term "at least about 71% similarity" with "at least 80% identity". Support for the amendments is found in the specification, e.g., page 18, line 6. The term "substantially" has also been deleted from the claims. New claims 70-72 are added and find support in the specification, e.g., page 18, lines 3-4 and 6-10. No new matter is introduced.

The specification has also been amended to address certain formality issues. No new matter is introduced.

1. In the Office Action Summary, it is incorrectly indicated that claims 7, 14, 24 and 27-69 are withdrawn from consideration. The Examiner expressly states on page 3 of the Action that restriction between SEQ ID NOS: 1 and 3 is withdrawn, and has acted on claims 1-26 in the Action.

Formality Objections

The Examiner alleges that the title of the specification is not descriptive. Applicants have amended the title to read: "Molecular Markers of Plant Embryogenesis", which is believed to be descriptive of the claimed invention.

The Examiner also alleges that the disclosure does not comply with 37 C.F.R. §1.182, because Figures 3 and 5-6 contain sequences that are not identified by sequence identifiers. In response, Applicants have amended the description of Figures 3 and 5-6 on pages 12-13 of the specification to insert the proper sequence identifiers.

The disclosure is further objected to because of the hyperlink on page 46, line 17. Applicants have deleted the hyperlink from the specification.

In view of the foregoing, the objections to the specification are overcome, and withdrawal thereof is respectfully requested.

35 U.S.C. §102(b)

Claims 1-24 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Lewis et al. (Gene. 2000 Apr 4; 246(1-2):81-91, and GenBank Accession No. AF191099, April 24, 2000; collectively "Lewis").

The Examiner alleges that Lewis teaches an isolated nucleic acid molecule from buckwheat (*Fagopyrum esculentum* Moench) that encodes a l-Cys peroxiredoxin polypeptide comprising an amino acid sequence having 79% similarity to instant SEQ ID NO:2. The isolated nucleic acid molecule taught by Lewis comprises, according to the Examiner, a sequence of nucleotides that is substantially as set forth in SEQ ID NO: 1 or SEQ ID NO:3, or its complementary form, or a nucleotide sequence having at least about 71% similarity to SEQ ID

NO:1 or SEQ ID NO:3 or its complementary form, or a nucleotide sequence capable of hybridizing to SEQ ID NO:1 or SEQ ID NO:3 or their complementary forms under low stringency conditions, because it encodes a peroxiredoxin polypeptide.

Applicants respectfully submit that the claims, as amended, require the nucleic acid molecule to encode a protein comprising an amino acid sequence as set forth in SEQ ID NO: 2 or having at least 80% identity with SEQ ID NO: 2 (see independent claims 1, 8 and 18). The nucleic acid molecule taught by Lewis does not encode a protein having at least 80% sequence identity with SEQ ID NO: 2. Therefore, Lewis does not teach each and every element of the claimed nucleic acid molecule.

Further, with respect to new claims 70-72, Lewis does not teach or suggest a nucleic acid molecule comprising a nucleotide sequence having at least 85% or 95% sequence identity with SEQ ID NO: 1 or 3, or nucleotide sequence capable of hybridizing to SEQ ID NO: 1 or 3 under the recited high stringency conditions.

Accordingly, the anticipation rejection under 35 U.S.C. §102(b) based on Lewis is obviated, and withdrawal thereof is respectfully requested.

35 U.S.C. §103(a)

Claims 25-26 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Lewis in view of Lee et al. (FEBS Lett. 2000 Dec 8; 486(2):103-6) ("Lee") and Parveez et al. (Biochemical Society Transactions, 2000, 28(6):969-972) ("Parveez"). Claim 25 is drawn to a plant cell, essentially a plant cell comprising a nucleic acid molecule as characterized in claim 1. Claim 26 depends on claim 25 and further defines the plant as a cell of an oil-palm plant.

Lee allegedly teaches that transgenic tobacco plants overexpressing Rice 1 Cys-

peroxiredoxin exhibit higher resistance against oxidative stress than non-transformed tobacco plants. Parvvez allegedly teaches that oil-palm plants can be transformed. The Examiner contends that it would have been *prima facie* obvious to one skilled in the art, at the time the invention was made, to transform a plant cell, including an oil-palm plant cell, with a nucleic acid molecule encoding a 1-Cys peroxiredoxin, such as the nucleic acid molecule encoding a 1-Cys peroxiredoxin taught by Lewis.

Importantly, the Examiner's rejection is premised on that Lewis teaches a nucleic acid molecule that encodes a 1-Cys peroxiredoxin polypeptide comprising an amino acid sequence having 79% similarity to instant SEQ ID NO: 2. However, as submitted above, Lewis does not teach or suggest a nucleic acid molecule that encodes a protein having at least 80% sequence identity with SEQ ID NO: 2, as presently claimed. Thus, the basic premise of the Examiner's obviousness rejection no longer exists. Accordingly, the rejection of claims 25-26 under 35 U.S.C. §103(a) is overcome. Withdrawal of the rejection is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



Xiaochun Zhu
Registration No. 56, 311

SCULLY, SCOTT, MURPHY & PRESSER, P. C.
400 Garden City Plaza-STE 300
Garden City, New York 11530
(516) 742-4343
XZ:ab